

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Claims

1. (currently amended) A process for combating the corrosion by naphthenic acids of the metal walls of a refining plant, characterized in that it comprises the addition, to a hydrocarbon stream having a TAN of greater than 0.2 to be treated by the refining plant, of an effective amount of a corrosion inhibitor consisting essentially of a compound of formula:



in which:

- B represents a saturated divalent hydrocarbon radical which can either be acyclic, in the linear or branched form, or cyclic and which comprises from 1 to 18 carbon atoms; and
 - R represents a hydrogen atom, an alkali or alkaline earth metal, an ammonium group, or an alkyl (linear or branched), cycloalkyl, aryl, alkylaryl or arylalkyl radical, said radical comprising from 1 to 18 carbon atoms, and optionally one or more heteroatoms.
2. (previously presented) The process as claimed in claim 1, characterized in that the compound of formula (I), comprises thioglycolic acid or esters thereof.
 3. (previously presented) The process as claimed in claim 1, characterized in that said compound of formula (I) comprises 2-ethylhexyl thioglycolate, isooctyl thioglycolate or

methyl thioglycolate.

4. (previously presented) The process as claimed in claim 1, characterized in that the amount of compound of formula (I) added corresponds to a concentration, expressed as equivalent weight of sulfur, with respect to the weight of the hydrocarbon stream, ranging from 10 to 5000 ppm.
5. (canceled)
6. (previously presented) The process as claimed in claim 1, characterized in that it is carried out at a temperature of between 200 and 450°C.
7. (previously presented) The process as claimed in claim 1, characterized in that the hydrocarbon stream to be treated is chosen from a petroleum crude oil, an atmospheric distillation residue, gas oil fractions resulting from atmospheric distillations, gas oil fractions resulting from vacuum distillations, a vacuum distillate or residue resulting from vacuum distillation.
8. (previously presented) The process as claimed in claim 1, characterized in that said divalent hydrocarbon radical comprises 1 to 4 carbon atoms.
9. (previously presented) The process as claimed in claim 1, characterized in that said alkyl (linear or branched), cycloalkyl, aryl, alkylaryl or arylalkyl radical comprising from 1 to 10 carbon atoms.
10. (previously presented) The process as claimed in claim 2, characterized in that said ester of thioglycolic acid comprises an aliphatic ester.
11. (previously presented) The process as claimed in claim 1, characterized in that the amount of compound of formula (I) added corresponds to a concentration, expressed as equivalent weight of sulfur, with respect to the weight of the hydrocarbon stream, ranging from 50 to

500 ppm.

12. (previously presented) The process as claimed in claim 1, characterized in that the hydrocarbon stream to be treated has a TAN of greater than 2.
13. (previously presented) The process as claimed in claim 1 characterized in that it is carried out at a temperature between 250 and 350° C.